INTERNATIONAL TOURISM AND ECONOMIC DEVELOPMENT – A PANEL DATA ANALYSIS OF TOP 10 TOURIST VISITED COUNTRIES

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ABSTRACT: *International tourism has been playing a key role in driving economic development for countries across the world. In fact, top 10 tourist visited countries have been gaining significant amount of tourism revenue, but also a large number of international tourists since two decades ago. As a result, this research analyzes relationships between international tourism and economic development of top 10 tourist visited countries. In so doing, the researchers adopted a quantitative research method, namely, panel-data multiple regression analysis to help analyze relationships among variables and test hypotheses. Key research findings confirmed that both international tourist receipts and outbound tourist expenditures have significant relationships with both GDP and GDP per Capita. Implications for future research and enhancing competitiveness of tourism industry are addressed.*

Keywords: *International Tourism, Economic Development, Panel Data Analysis*

Introduction

Tourism has viewed as a key sector of countries around the world and has significantly contributed to advancing economic development (World Bank, 2019 and UNWTO, 2019a). Tourism has become the major export industry in the world as characteristics of this industry make it a solid driver of economic development, but also promote balanced regional development (Travel & Tourism Competitiveness Report. (2017). According to UNWTO (2019d), the number of international tourists worldwide in 2018 is forecasted to reach 1.4 billion or increase 6.1% compared to 2017 with a forecast to continue a growth trend of 3-4% in the long-run. As displayed in Table 1, top 10 tourist visited countries gained a huge volume of international tourist arrival during 2016 and 2017 accounting for approximately 41.2% and 41.8% of the world total tourist arrival respectively. In addition, international tourist receipt of these 10 most visited countries during 2016 and 2017 were around 41.4% and 40.6% of the world total tourist receipt respectively. According to the recent Travel & Tourism Competitiveness Report (2017), travel & tourism activities contributing over 10% to global GDP for several decades, continues to be a significant driving force of opportunities for countries around the world to enhance their standard of living and long-term economic stability.

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Table 1: International Tourist Arrival and Receipt of Top 10 Tourist Visited Countries

Countries	Tourist Arrival 2016 (Million)	Tourist Arrival 2017 (Million)	% Change of Arrival (YoY)	Tourist Receipt 2016 (Billion US$)	Tourist Receipt 2017 (Billion US$)	% Change of Receipt (YoY)
France	82.7	86.9	5.1%	54.5	60.7	11.4%
Spain	75.3	81.8	8.6%	60.5	68.0	12.4%
United States	76.4	76.9	0.7%	206.9	210.7	1.8%
China	59.3	60.7	2.3%	44.4	32.6	-26.6%
Italy	52.4	58.3	11.3%	40.2	44.2	10.0%
Mexico	35.1	39.3	12.0%	20.6	22.5	9.2%
United Kingdom	35.8	37.7	5.3%	47.9	51.2	6.9%
Turkey	30.3	37.6	24.1%	26.8	31.9	19.0%
Germany	35.6	37.5	5.3%	37.5	39.8	6.1%
Thailand	32.6	35.4	8.6%	48.8	57.5	17.8%

Source: UNWTO (2019b and 2019c) and World Bank (2019)

It has been evident that tourism industry, as a major service industry of many countries, drives both economic and social change by stimulating employment and investment, transforming economic structure and making positive contributions towards balance of payments and eventually gross domestic product or GDP (Mason, 2016; Mattes et al. 2017). Likewise, international tourism has been increasingly recognized as an important source of revenues as well as a national strategic tool in solving various social challenges (e.g. poverty, food security, environmental protection) especially in those developing and emerging economies (Pedrana, 2013; Saner et al., 2015). Similarly, addressed in Mason (2016) and UNWTO (2019a), both businesses and public agencies have dedicated considerable resources to advance tourism sector at national, state, and local levels. Thus, international tourism has become a strategic issue in state, regional and community economic development. In turn, it is important that serious attention is needed to investigate relationships between several international tourism factors and economic development to expand our knowledge in economics and tourism management.

With reference to highlighted facts and statistics as well as academic and practitioner arguments noted earlier, the main purposes of this research are to examine relationships between international tourism and economic development of top 10 tourist visited countries (see also Table 1), but to also provide implications. In this regard, this research aims to confirm generic relationships between several variables reflecting international tourism and economic development in terms of GDP and GDP per Capita of those top 10 tourist visited countries with a panel data regression model with the use of panel data from 1997–2017 period.

Literature Review

The relationships between international tourism and economic development have been evident in both academic and practitioner literature (Mason 2016; UNESCO, 2019; UNWTO, 2019a). In the context of economics, international tourism, a part of international trade in services, has been claimed as a key driver of economic development (Krugman et al., 2012). As economic development has been defined as *the process of growing the nation's output along with improvement in welfare of citizens*; therefore, its scope is broader than economic growth, which focuses on rising in output level (World Bank, 2019). Although economic development can be measured through a variety of economic and social indicators, gross domestic product (GDP) and GDP per Capita are considered appropriate ones to represent the outcomes of economic development on the aggregate level (Sen, 1999; Mankiw, 2015). GDP is widely accepted as a measure of total market value of all final goods and services produced in .an economy in a given year (Mankiw, 2015). By using the expenditure approach, components of GDP are classified as follows: personal consumption expenditures (C); gross private investment (I); government consumption (G); and net

exports (X – M), consisted of exports (X) and imports (M). In turn, GDP identity equation is displayed below:

$$GDP = C + I + G + (X - M) \text{ ------ } (1)$$

GDP per Capita measures a nation's output that accounts for its people in a specified period by dividing the nation's GDP with its total population (World Bank, 2019). It spells out the standard of living of people in a country, but also be a useful tool for wealth comparison among different countries and reflects a country's development status (Mankiw, 2015). However, it is limited in pointing out the pattern of income distribution, non-monetary activities, appropriateness of investment, and being distorted by cost of living differences (Sen, 1999).

With regard to the equation (1) and economic arguments, C, I, G and X are positively associated with GDP, while the effect of M on GDP may be either negative or positive (Krugman et al., 2012; Mankiw, 2015). Many countries imported intermediate goods and capitals to support domestic production and investment and exported goods to other nations and, in turn, M is viewed to have an indirect positive relationship with GDP (IMF, 2019). Likewise, service imports such as outbound tourism, financial services, and so on, tend to positively associate with GDP (IMF, ibid.). Moreover, outbound tourism activities of many countries have displayed upward growth trend over past several decades because these activities grew in parallel with increase in GDP level (Mason, 2016; UNWTO, 2019b, 2019c, 2019d).

As addressed in Harcombe (1999), Porter (1998) and UNWTO (2019a), among them, international tourism can stimulate a nation's industrial sectors through both backward- and forward-linkages as well as cross-sector synergies with sectors like hospitality, transport, construction, entertainment and the like. Earnings stemming from tourism activities induce a chain of transactions driving demands for goods and services from these related sectors, which, in turn, foster GDP (Mason, 2016). In other words, money spent by foreign tourists in one country can be turned over several times and the total revenue obtained from tourism is a number of times more than the actual spending. The multiplier effect of international tourism is linked with a board range of economic activities and, thus, underpins GDP and standard of living of people in a country (Mankiw, 2015).

The researchers observed previous empirical studies, which examine the relationships between tourism and economic outcomes, and found several advanced statistical techniques adopted to confirm the existence of such relationships. Each technique adopted, nonetheless, has different advantages in examining hypotheses and presenting research findings with some limitations affected by research objective, conceptual model, and data attributes and availability (Enders, 1995; Hayashi, 2001; Greene, 2002).

There are a number of existing empirical studies adopted time-series or panel data econometric technique to affirming the existence of long-term relationship between tourism and economic outcomes, which research results can guide policymakers on where and how to allocate resources to support tourism activities. Adamou and Crerides (2009) tested the relationship between tourism specialization, development and economic growth using Cyprus data. Empirical results in descriptive cross-country comparisons indicated a link between tourism specialization and level of development, but also econometric analysis results illustrated that tourism specialization is associated with higher rates of economic growth at relatively low levels of specialization. Samimi et al. (2011) investigated long-run relationships between economic growth and tourism development in developing countries using P-VAR approach during 1995-2009. They confirmed a bilateral causality and positive

long-run relationship between economic growth and tourism development.

Caglayan et al. (2012) examined the causal relationship between tourism revenue and GDP using the panel data of 135 countries for the period 1995–2008 and also panel Granger causality analysis was deployed to 11 groups of countries. Research findings confirmed bidirectional causality in one group of countries, unidirectional causality in 3 groups, reverse direction in 2 groups, and no causal relationship in 5 groups.

Lean et al. (2014) tested the impact of tourism on economic growth of Malaysia and Singapore including 2 control variables, namely, international trade and exchange rate to enhance the model specification. Results affirmed that economic-driven tourism growth hypothesis is found in Malaysia while tourism-led economic growth hypothesis has been evident for Singapore. Key implication is that both nations need to maintain a competitive exchange rate to nurture the tourism and economic growth.

Bayramoglu and Ari (2015) analyzed the impact of foreign visitors' expenditures, who visited Greece between 1980 and 2013, on Greece's economic growth and confirmed a strong unidirectional causality from foreign visitors' expenditures to economic growth at 1 % level of significance.

Bento (2015) investigated linkages between tourism and economic growth of Portugal with the adoption of a time series co-integration disaggregated approach to study the impacts of both domestic tourists and foreign tourists on economic growth. Results showed that the tourism-led growth hypothesis is confirmed for Portugal and domestic tourism boosted economic growth.

Kum et al. (2015) investigated the linkage between tourism activity and economic growth for Next-11 (N-11) countries and confirmed: (i) a long-term relationship between tourist arrivals and GDP in general and (ii) relationship between tourism arrivals and GDP growth in N-11 countries.

Cárdenas-García et al. (2015) deployed structural equation model (SEM) approach to verify tourism growth and economic development with data from 144 countries and reached two key conclusions including: firstly, countries with a higher value of the synthetic index of economic development in 1991 enjoyed economic development from tourism growth and, secondly, tourism growth of those countries, which have a lower value of the synthetic index of economic development in 1991, didn't significantly influence economic development.

Phiri (2016) analyzed co-integration and causal effects between tourism and economic growth in South Africa for annual data collected between 1995 and 2014 using tourist receipts and number of international tourist arrivals as tourism development indicators. Research results confirmed the linkage between tourist receipts and economic growth, while the non-linear analysis displayed bi-directional causality between tourist receipts and economic growth. There was a linear relationship between tourist arrivals and economic growth and no causality for the non-linear relationship between tourist arrivals and economic growth.

Alhowaish (2016) examined the causal relationship between tourism development and economic growth in Gulf Cooperation Council (GCC) countries in a multivariate model. With the use of panel data for the period 1995–2012 and Granger causality approach to assessing the contribution of tourism to economic growth in GCC countries, empirical findings demonstrated a uni-directional Granger causality from economic growth to tourism growth.

Govdeli and Direkci (2017) studied the long-term relationship between tourism revenues and economic growth between the years 1997 and 2012 for 34 OECD countries using panel data co-integration model and, in turn, concluded that the

growth of tourism revenue positively affected economic growth in the long term.

Tobash (2017) investigated the long-term relationship between economic growth and international tourism receipts (ITRs) in the state of Palestine during the period 1995-2014. In turn, results spoke out a unique long-term relationship between GDP and international tourism receipts and affirmed a causal relationship from ITR towards economic growth in Palestine and provided policy implications to generate employment opportunities, poverty alleviation and economic growth.

Various studies from both academia and international agencies deployed both qualitative and quantitative method to describe tourism-led economic development and how to enhance tourism competitiveness. They explored sustainable tourism practices and, in turn, proposed implications to tackle major challenges facing tourism industry especially for those least developed and emerging economies (Travel & Tourism Competitiveness Report, 2017; UNESCO, 2019; UNWTO, 2019a). Pedrana (2013) emphasized the importance of local economic development policies and addressed that tourism is a crucial economic activity and complementary to other local economic activities affecting the development of an area. Likewise, Saner et al. (2015) mentioned that tourism strategies of a developing country can effectively generate revenue and opportunities and, in turn, offer sustainable employment. Countries, especially Least Developed Countries (LDCs), can deploy their tourism sector to reach economic development potentials. In addition, World Bank, an international agency granting capitals and resources to its member countries for executing infrastructure development projects in general and tourism industry in particular, has showed that tourism industry has largely contributed to economic development and, in turn, provided several economic indicators that measure international tourism activities (World Bank, 2019). These indicators cover inbound and outbound tourist spending and number of tourist arrivals and departures and have long been used in empirical research.

Moreover, there is an economic indicator, namely, revealed comparative advantage (RCA) index used by economists to evaluate advantage or disadvantage of a nation in exporting goods or services to the rest of the world (Balassa, 1965; Balassa and Noland, 1989). Based on the Ricardian trade theory, RCA index addresses that trade among nations is determined by their relative differences in productivity and can be calculated with the use of trade data (Balassa, Ibid.). RCA index, nonetheless, can provide an approximation of a nation's competitive export strengths, because tariffs, non-tariff, subsidies and other trade measures are not taken into account (Krugman et al., 2012). As Balassa (1965) noted, a nation has a revealed comparative advantage in a given goods i, when its ratio of export of goods i to its total export of all goods greater than the same ratio for the world as displayed in the following formula:

$$RCA = \{x_i/X_i\}/\{w_i/W_i\} \text{ -------- (2)}$$

Where:

x_i = export of goods or services i of a country

X_i = total export of a country

w_i = export of goods or services i of the world

W_i = total export of the world

When a country has RCA of a goods/service greater than 1, it is a competitive producer and exporter of that goods/service above the world average. By contrast, when a country has RCA of a goods/service less than 1, it is a non-competitive producer and exporter of that goods/service below the world average. The higher the value of a country's RCA for goods/service i, the higher its export strength in goods/service i. In the context of

tourism industry, RCA is considered appropriate to be an indicator of a country's tourism strength compared to the world (Balassa and Noland, 1989). The researchers, therefore, can incorporate RCA into the research model to examine the relationship between international tourism and economic development.

As every economy has been experienced irregular movement of its output level as part of business cycle caused by external shocks (e.g. financial crisis, energy crisis, epidemic, terrorism, drought), it is important to seriously consider them as the mediator when investigating relationships between tourism and economic outcome (Mankiw, 2015). Such shocks (e.g. Asian Financial Crisis in 1997-1998, Bird-Flu Epidemic in 2002-2003; Global Subprime Crisis in 2008-2009, European Sovereign Debt Crisis in 2011-2012) induced adverse consequences to the nation's economic activities including tourism and related sectors and, thus, slowdown in economic development (IMF, 2019; World Bank, 2019).

Based on evidence from literature reviews in both theoretical and empirical aspects addressed earlier, the researchers propose research hypothesis as *"there are relationships between international tourism and economic development"*. Variables, which represent international tourism, include (i) Inbound Tourist Arrivals, (ii) Outbound Tourist Departures, (iii) Inbound Tourist Receipts, (iv) Outbound Tourist Expenditures and (v) Revealed Comparative Advantage (RCA). GDP and GDP per Capital are two variables, which represent economic development. Also important, Shock is an important independent variable included in our research model as the mediator of international tourism and economic development.

Research Methods

As this study aims to examine relationships between international tourism and economic development, researchers collected data across top 10 tourist countries including China, France, Germany, Italy, Mexico, Spain, Thailand, Turkey, United Kingdom and United States. Also, external shocks addressed in the previous section were considered to as a mediator of international tourism and economic development. These secondary data will be used to undertake panel data regression analysis with 6 independent variables – i.e., Inbound Tourist Arrival (X_1), Outbound Tourist Departure (X_2), Inbound Tourist Receipt (X_3), Outbound Tourist Expenditure (X_4), Revealed Comparative Advantage or RCA (X_5), and Shock (X_6) - and 2 dependent variables – i.e., GDP (Y_1) and GDP per Capita (Y_2). Data are ranged from year 1997 to 2017 (21 years period) as summarized in Table 2

Table 2: A Summary of Secondary Data Used in This Research

	Variable	Total Data Units [1]	Data Source(s)
1	Inbound Tourist Arrival (X_1)	210	"International Tourism, Number of Arrivals" from World Bank
2	Outbound Tourist Departure (X_2)	210	"International Tourism, Number of Departures" from World Bank
3	Inbound Tourist Receipt (X_3)	210	"International Tourism, Receipts" from World Bank
4	Outbound Tourist Expenditure (X_4)	210	"International Tourism, Expenditures" from World Bank
5	Revealed Comparative Advantage (RCA) (X_5)	210	All data used to calculate RCA obtained from World Bank[2]

6	Shock (X_6)	210	"Dummy Variable" compiled by researchers from various sources[3]
7	GDP (Y_1)	210	"GDP - Current Price" from IMF
8	GDP per Capita (Y_2)	210	"GDP per Capita - Current Price" from IMF

Notes:

1. Data for all variables collected across 10 countries from 1997 – 2017. Thus, each variable has 210 total data units.
2. RCA index was computed by researchers with reference to RCA Formula (Balassa and Noland, 1989). Data collected for top 10 tourist visited countries include (1) International Tourism, Country Receipts, (2) Country Total Export, (3) Total International Tourism, World Receipts and (4) World Total Export.
3. Data compiled from (1) World Bank, (2) IMF and (3) World Tourism Organization (UNWTO).

With regards to Econometric approach (Enders, 1995; Hayashi, 2001; Greene 2002), the researchers considered developing panel data multiple regression models to examine relationships between international tourism and economic development with data gathered from top 10 tourist visited countries. In the beginning, panel unit root test was implemented to ensure that all data series have stationary process and be qualified to test hypotheses. Next, two multiple regression models were formulated and hypotheses were investigated for all 6 independent variables and 2 dependent variables as displayed in the following equations:

$$Y_{1ij} = \beta_0 + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \beta_5 X_{5ij} + \beta_6 X_{6ij} + \varepsilon_{1ij} \text{ -------- (1)}$$

$$Y_{2ij} = \beta_0 + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \beta_5 X_{5ij} + \beta_6 X_{6ij} + \varepsilon_{2ij} \text{ -------- (2)}$$

Where:

Y_{1ij} = GDP – Current Price
Y_{2ij} = GDP per Capita – Current Price
X_1 = Inbound Tourist Arrival
X_2 = Outbound Tourist Departure
X_3 = Inbound Tourist Receipt
X_4 = Outbound Tourist Expenditure
X_5 = Revealed Comparative **Advantage (RCA)**
X_6 = Shock (Dummy Variable, where 1 = existence of external adverse event and 0 = no external adverse event)
β_0= Intercept
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 = Independent Coefficients
ε_{1ij} and ε_{2ij} = Error Term in Equation 1 and 2 respectively

I = Top 10 tourist countries (1, 2, …. , 10) including China, France, Germany, Italy, Mexico, Spain, Thailand, Turkey, United Kingdom and United States.
J = Time period (1, 2, …. , 21) from year 1997 to 2017

Equation 1 demonstrates relationships between 6 independent variables and GDP (Y_1) and equation 2 represents relationships between 6 independent variables and GDP per Capita (Y_2). With reference to Hayashi (2001) and Greene (2002), this empirical research was conducted in multiple regression analysis with panel data. To confirm relationships between independent and dependent variables displayed in equations 1 and 2, t-Statistic is employed as the main indicator to accept or reject Null Hypothesis with the 95% significance level. Moreover, researchers evaluated the goodness of fit via R-Square, F-Statistic and Durbin-Watson Statistic and selected appropriate

regression model(s) to ensure the reliability of hypothesis testing results.

Research Results

Prior to testing hypotheses, the researchers examined whether 6 independent variables and 2 dependent variables mentioned in the previous section are stationary. We converted 7 variables, except Shock (X_6), to be logarithm value. PP-Fisher Chi-Square and PP-Choi Z-stat were adopted to conduct the panel unit root test of all variables at level or I(0) process without intercept and trend. As displayed in Table 3, only 1 out of 8 variables is stationary (i.e., X_6), while others (i.e., X_1 – X_5 and Y_1 and Y_2) are non-stationary. This implies that 7 out of 8 data processes have a unit root problem and, thus, these data sets are unqualified to continue hypothesis testing (Enders, 1995).

Table 3: Panel Unit Root Test (Fisher Chi-Sqare and Choi Z-stat) at Level or I(0) Process

Variable	PP - Fisher Chi-square	PP - Choi Z-stat	Panel Unit root Test Result
X_1	0.18544	8.66663	Non-Stationary
X_2	0.38690	9.00464	Non-Stationary
X_3	0.63500	7.33585	Non-Stationary
X_4	0.56863	7.59195	Non-Stationary
X_5	20.0411	0.23726	Non-Stationary
X_6	88.8038**	-7.12216**	Stationary
Y_1	1.00128	6.90142	Non-Stationary
Y_2	0.70738	7.60218	Non-Stationary

**Note = significance at the 99% confidence level

To tackle the above unit root problem, the researchers transforms logarithm data into first difference and original data into growth rate; thus, new data series is I(1) process (Enders, 1995). Unit root test results of data displayed in Tables 4 and 5 indicated that all variables in I(1) process are stationary with significance at the 99% confidence level.

Table 4: Panel Unit Root Test (Fisher Chi-Sqare and Choi Z-Stat) at First Difference or I(1) Process

Variable	PP - Fisher Chi-square	PP - Choi Z-stat	Panel Unit root Test Result
X_1	102.267**	-7.78182**	Stationary
X_2	135.508**	-9.31901**	Stationary
X_3	114.438**	-8.51601**	Stationary
X_4	118.711**	-8.50424**	Stationary
X_5	164.088**	-10.7433**	Stationary
X_6	101.352**	-9.03098**	Stationary
Y_1	97.2561**	-7.22240**	Stationary
Y_2	91.8075**	-6.87741**	Stationary

Note: ** = significance at the 99% confidence level

Table 5: Panel Unit Root Test (Fisher Chi-Square and Choi Z-stat) – Growth Rate or I(1) Process

Variable	PP - Fisher Chi-square	PP - Choi Z-stat	Panel Unit root Test Result
X_1	100.446**	-7.68280**	Stationary
X_2	134.239**	-9.26679**	Stationary
X_3	109.333**	-8.23658**	Stationary
X_4	114.080**	-8.32646**	Stationary
X_5	157.458**	-10.4716**	Stationary
X_6	101.352**	-9.03098**	Stationary
Y_1	89.6014**	-6.83533**	Stationary
Y_2	84.5468**	-6.50437**	Stationary

**Note= significance at the 99% confidence level

Next, the researchers undertook panel data regression analysis using both log first difference and growth rate data series to assess R^2, F-Statistic and Durbin-Watson (DW) Statistic to justify the appropriateness of proposed regression models prior to testing hypotheses (Hayashi, 2001; Greene, 2002). As exhibited in Table 6, panel data regression models 1 and 2, which use logarithm first difference data series, faced serial-correlation problem since Durbin-Watson test results are inconclusive (i.e., dL < DW Statistic < dU). By contrast, panel data regression models 3 and 4, which adopt growth rate data series, have no serial correlation problem since DW Statistic results are higher than the upper bound cut-off value (i.e. dU < DW Statistic). Thus, the researchers continue hypothesis testing with the use of panel data regression models 3 and 4.

Table 6: Assessment of Overall Regression Models

Model	R-Squared (R^2)	F-Statistic	Durbin-Watson (DW) Statistic	Continue Hypothesis Testing (Yes/No)
Model 1: Y_1 (GDP) as Dependent Variable (Logarithm Data Series)	0.4988	32.014**	1.652	No
Model 2: Y_2 (GDP per Capita) as Dependent Variable (Logarithm Data Series)	0.4985	31.977**	1.666	No
Model 3: Y_1 (GDP) as Dependent Variable (Growth Rate Data Series)	0.6590	62.166**	1.750[1]	Yes
Model 4: Y_2 (GDP per Capita) as Dependent Variable (Growth Rate Data Series)	0.6625	63.137**	1.771[1]	Yes

**Note= significance at the 99% confidence level,
1 = DW Statistic > dU (dU = 1.735; k = 6 and N = 200)

As displayed in Tables 7 and 8, the Panel Data Regression Models can overall address relationships between international tourism factors and GDP with relatively high R^2, significant F-Statistic and DW Statistics > dU (Hayashi, 2001; Greene, 2002).

Table 7: Test of Relationships between International Tourism Factors and GDP

Independent Variable	Coefficient	Standard Error	t-Statistic	P-Value
X_1	-0.267899**	0.072877	-3.676031	0.0003
X_2	0.016019	0.034995	0.457738	0.6477
X_3	0.821131**	0.072159	11.37952	0.0000

X_4	0.252138**	0.042934	5.872630	0.0000
X_5	-0.768180**	0.073539	-10.44586	0.0000
X_6	0.000009	0.012310	0.007310	0.9942
R^2 = 65.09%				
F-stat = 62.166 (P=Value = 0.000000) Durbin-Watson stat. = 1.750281 (dL = 1.613, dU = 1.735; k = 6 N = 200)[1]				

**Note= significance at the 99% confidence level

No Serial Correlation due to Durbin-Watson Stat is higher than dU

Research results suggested that both Inbound Tourist Receipt (X_3) has a positive relationship with GDP (Y_1) and GDP per Capita (Y_2) with the 99% confidence level. Inbound Tourist Receipt (X_3) displayed the strongest positive relationship with both GDP (Y_1) and GDP per Capita (Y_2) in line with arguments in both economics and tourism theory (Krugman et al., 2012; Mankiw, 2015; Mason, 2016; UNWTO, 2019a). As noted in Adamou and Clerides (2009) and Saner et al. (2015), foreign tourist receipts generate revenues for local businesses and boost employment across tourism support and related industries. Likewise, this finding supports arguments that foreign tourist receipts drive economic outcomes (e.g. GDP growth) investigated in previous empirical studies (Caglayan et al., 2012; Bayramoglu and Arı, 2015; Phiri, 2016; Govdeli and Direkci, 2017; Tobash, 2017).

Empirical results confirmed that Outbound Tourist Expenditure (X_4) positively linked with both GDP (Y_1) and GDP per Capita (Y_2) with the 99% confidence level. This finding confirms economic arguments that outbound tourist departure (i.e. import of tourism services) move in the same direction with GDP per Capita or personal income (Krugman et al., 2012; Mankiw, 2015), but also in line with historical data trend displayed in international economic agencies (IMF, 2019; World Bank, 2019).

Table 8: Test of Relationships between International Tourism Factors and GDP per Capita

Independent Variable	Coefficient	Standard Error	t-Statistic	P-Value
X_1	-0.259959**	0.071505	-3.635548	0.0004
X_2	0.011827	0.034336	0.344455	0.7309
X_3	0.808284**	0.070800	11.41651	0.0000
X_4	0.251963**	0.042126	5.981202	0.0000
X_5	-0.761836**	0.072154	-10.55846	0.0000
X_6	-0.000351	0.012079	-0.029022	0.9769
R^2 = 66.25%				
F-statistic = 63.137 (P=Value = 0.000000) Durbin-Watson Stat = 1.771135 (dL = 1.613, dU = 1.735; k = 6 N = 200)[1]				

Note: ** = significance at the 99% confidence level

No Serial Correlation due to Durbin-Watson Stat is higher than dU

Empirical findings illustrated that Inbound Tourist Arrival (X_1) had a negative relationship with GDP (Y_1) and GDP per Capita (Y_2) with the 99% confidence level. These findings were against arguments in the literature and previous studies (Bayramoglu and Ari, 2015; Mason, 2016; Phiri, 2016; Travel & Tourism Competitiveness Report, 2017; UNESCO, 2019; UNWTO, 2019a). Nonetheless, one can argue that some top tourist visited countries may have a huge volume of inbound foreign tourists, but with relatively low spending so that there is no strong effect on the host countries' economy.

Research findings showed that RCA (X_5) has a negative relationship with both GDP (Y_1) and GDP per Capita (Y_2) with the 99% confidence level. In turn, such research results contradicted with

comparative advantage arguments noted in Balassa (1965), Balassa and Noland (1989) and Porter (1998). With the use of World Bank database to calculate RCAs for top 10 tourist visited countries, researchers found that RCAs of China, Germany and Mexico were less than one from 1997 – 2017 and of Italy, and United Kingdom were closed to one and, therefore, these may reflect that tourism industry of these nations may not be competitive compared to other industries.

Analysis results didn't address that Outbound Tourist Departure (X_2) has a relationship with GDP (Y_1) and GDP per Capita (Y_2), although there were evidence that the number of tourist departures during the past recent years grew faster than projections (UNWTO, 2019a, 2019d). By reviewing database of International Tourism, Number of Departures during 1997 – 2017 published by World Bank (2019), the number of tourist departures of several top tourist visited countries including France, Mexico, Spain, Thailand and Turkey slowly increased, while the number of tourist departures of China, United Kingdom and United States significantly increased in line with or faster than increase in GDP and GDP per Capita.

Lastly, this empirical study didn't confirm that Shock (X_6) mediates the relationships between international tourism and economic development as addressed in economic literature (Krugman et al., 2012; Mankiw, 2015). According to evidence from international agencies (IMF, 2019; World Bank, 2019), global tourism activities and spending continue their growth momentum, although overall economic growth trend has been slow down during the past decades. These phenomena are in line with global mega trend that consumers around the world spend their money to travel in foreign countries to gain experiences and purchase less merchandising items (Travel & Tourism Competitiveness Report, 2017; UNTWO 2019a).

Conclusions And Recommendations

In this study, our literature review addressed that tourism has relationships with economic development across different nations. Thus, our empirical study adopted a panel-data regression analysis to examine relationships between international tourism factors (i.e. Inbound Tourist Arrivals, Outbound Tourist Departures, Inbound Tourist Receipts, Outbound Tourist Expenditures, and Revealed Comparative Advantage (RCA) for the nation's tourism sector) and economic development variables (i.e. GDP and GDP per Capita). The researchers also included a dummy variable, namely, Shock, to indicate some unusual incidents, which mediated the international tourism - economic development linkage.

Key findings from this study were summarized as follows. Firstly, Inbound Tourist Revenue (X_3) and Outbound Tourist Expenditure (X_4) have statistically significant relationship with both GDP and GDP per Capita. Secondly, Inbound Tourist Arrival (X_1) and RCA (X_5) have negatively relationship with both GDP and GDP per Capita. In turn, these results contradict with tourism and economic development theory and may be caused by various factors; for instance, inadequate data, the quality of inbound tourists, and the like. Lastly, Outbound Tourist Departure and Shock have no significant relationship with both GDP and GDP per Capita. This implies that the number of tourist departures may not be relevant to economic development, but spending does more matters. Also, tourism sector to a large extent was resilient despite facing adverse incidents.

Based on empirical results mentioned earlier, the researchers address academic recommendations as follows. Future research can be conducted in a mix methodology, using both qualitative and quantitative mode, to examine competitiveness of tourism sector of the nations, but also explore new potential drivers of each nation. Likewise, new empirical studies could focus on those less

competitive tourism nations, which will disclose tourism development gaps and suggestions on how to uplift tourism industry. For practical improvement, since this empirical research has indicated that inbound tourist receipts significantly contributed to GDP and GDP per Capita; thus, researchers recommend government agencies responsible for tourism industry promotion to develop policies and strategies focusing on "increase foreign tourist spending". Moreover, government agencies should provide additional incentives for foreign tourists to have a long visit period and multi-location visits. These are likely to stimulate more spending from them.

Limitations of This Research

Three main limitations of this research have been evident. First, as this research was carried out in a panel data, not time series, analysis mode, researchers can only confirm relationships but not causation, between variables (Hayashi, 2001; Greene, 2002). Another limitation is that although researchers can collect secondary data from several global public agencies, time-span of each variable (i.e., 21 periods from 1997 - 2017) remains insufficient to pass the unit root test and, in turn, cannot conduct time-series regression analysis by country (Enders, 1995). Lastly, some required data (e.g. period of stay per trip, number of tourist by region) are unavailable in those global public agencies and, thus, limit our opportunities to examine additional meaningful relationships and provide implications for policy-makers.

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